

REMARKS:

In the Office Action mailed on May 19, 2005, the Examiner objected to the drawings because they were informal, objected to claim 7 under 37 CFR section 1.75 as being a substantial duplicate of claim 1 and, therefore, creating an improper double patenting, objected to claim 13 because of an informality of not having proper antecedent basis, rejected claims 1, 2, 5, 7, 8, 11, 13, 14, and 17 under 35 U.S.C. section 102 (b), as anticipated by Frantz et al. (US 5,169,322), rejected claims 3, 4, 9, 10, 15, and 16 under 35 U.S.C. section 103 as an obvious combination of Franz et al (US 5,169,322) in view of Consoli et al (US 6,176,738) and indicated that claim 6, 12, 18, and 19 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With this amendment claims 2, 4, 7 - 12, 14, and 16 have been canceled and claims 1 and 13 have been amended. Claims 1, 3, 5, 6, 13, 15, and 17 - 19 remain in this application.

Objections to the Drawings

Attached are copies of the drawings marked as Replacement Sheets which represent a formal rendition of the drawings originally submitted as informal. No changes were made to the subject matter depicted in the drawings.

Double Patenting

To over come the objection of double patenting, claims 7 - 12 have been canceled.

Claim Objections

To overcome the objection to the claim 13 regarding proper antecedent basis, the first use of mating connector was changed to "a mating connector" and all subsequent uses of mating connector was changed to " said mating connector".

Claim Rejections - 35 U.S.C. section 102

The Examiner rejected claims rejected claims 1, 2, 5, 7, 8, 11, 13, 14, and 17 under 35 U.S.C. section 102 (b) as anticipated by Frantz et al. (US 5,169,322). To overcome this rejection independent claims 1 and 13 have been modified to include the limitations of a) an

alignment boss inserted into and through the locating hole in the printed circuit board to a location at least generally flush with the mating surface of the board and b) the housing including at least one flexible latch arm engageable in a latch opening and insertable in a direction perpendicular to the printed circuit board. The applicants believe that the claimed invention is not taught or suggested in the cited prior art.

More specifically, the Franz et al. patent discloses a header mountable on a printed circuit board. The Examiner suggested that this patent also discloses an alignment boss (29) inserted into a locating hole in the printed circuit board. However, there is no suggestion that any portion of the header which is inserted into the locating hole extends through the locating hole in the board to a location at least generally flush with the board mating surface.. As discussed in the specification of the subject application, on page 9 lines 10 - 14, by extending alignment bosses through the thickness of the printed circuit board within the locating holes, the guide posts can enter the guide holes before the terminal pins enter passages which allows the guide posts to be shorter than those in the prior art.

Moreover, the Consoli et al. patent discloses a housing that has a latch. However, that reference teaches away from the latch being insertable into the locating hole in a direction perpendicular to the board. Quite the contrary the connector in the Consoli et al. patent is inserted into the board in a direction first perpendicular to the board but without the latch engaging the latch edge and thereafter in a direction parallel to the board while the latch engages the board opening in a direction parallel to the board. If the latch engaged an opening in the board in a direction perpendicular to the board, then the sliding panel mounting configuration could not be used since the perpendicularly inserted latch would prevent any further sliding movement.

Since none of the references disclose a boss passing through a printed circuit board or a latch inserted into the printed circuit board in a direction perpendicular to the board, as amended herein, the rejection under 102 has been overcome.

Claim Rejection - 35 U.S.C. Section 103

The Examiner rejected claims 3, 4, 9, 10, 15, and 16 under 35 U.S.C. section 103 as being an obvious unpatentable combination of Franz et al (US 5,169,322) in view of Consoli et al (US 6,176,738). However, as discussed above, none of the references disclose either a) an alignment boss inserted into and through a locating hole in a printed circuit board and b) the housing including at least one flexible latch arm engageable in a latch opening and insertable in a direction perpendicular to the printed circuit board. Since, as explained above, even the combination of the references will not include all of the elements in the claimed invention, as amended herein, the rejection under 35 U.S.C. section 103 has been overcome.

Allowed and Allowable Claims

The Examiner is thanked for indicating that claims 5 - 9, 15, 16, and 18 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Changes to the claims as suggested by the Examiner were not made since they would not be needed in view of the arguments mentioned above.

Since all of the objections and rejections have been overcome, the Examiner is respectfully requested to allow all of the claims remaining in this application to grant into a patent.

Respectfully submitted,

MOLEX INCORPORATED

By: 

Stephen Z. Weiss
Registration No. 28,486
Attorney of Record

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Mailing Address:
Stephen Z. Weiss
MOLEX INCORPORATED
2222 Wellington Court
Lisle, Illinois 60532
Tel.: (630) 527-4430
Fax.: (630) 416-4962